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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,003	11/13/2001	Satoshi Seo	740756-2389	6380

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EXAMINER	
NEGRON, ISMAEL	

ART UNIT	PAPER NUMBER
2875	

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/987,003	SEO, SATOSHI	
	Examiner	Art Unit	
	Ismael Negron	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-92* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-92* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 5, 2004 has been entered.

2. Claims 1, 2, 12, 13, 23, 26, 36, 39, 49 and 59 have been amended. No claim has been cancelled. Claims 69-74 have been added. Claims 1-74 are still pending in this application, with claims 1, 12, 23, 36, 49 and 59 being independent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 12-15, 23-28, 36-41, 49-51, 59-61 and 69-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over KAWAMI et al. (U.S. Pat. 5,882,761) in view of SOUTHWICK, Jr. (U.S. Pat. 2,578,324).

KAWAMI et al. discloses an illumination device having:

- **a container sealed off from the atmosphere**, Figure 1, reference number 10;
- **an organic electro luminescent element (OELE) located in the container**, Figure 1, reference number 4;
- **a drying agent located in the container**, Figure 1, reference number 8;
- **the drying agent chemically absorbing moisture and maintaining its solid state after the moisture absorption**, column 4, lines 35-37;
- **the drying agent including one of an alkaline metal oxide and an alkaline-earth metal oxide**, column 4, lines 43-47;
- **the drying compound including sodium oxide (Na_2O)**, column 4, lines 48 and 49;
- **the drying compound including calcium oxide (CaO)**, column 4, line 51;
- **the container including a substrate formed separately from the OELE**, Figure 1, reference number 7;
- **the drying agent being in contact with the substrate**, Figure 1;
- **the container having a concave inner portion where the drying agent is contained**, Figure 1, reference number 11; and
- **the illumination device being incorporated into an OELE display device**, column 1, lines 6-9.

KAWAMI et al. discloses all the limitations of the claims, except the drying agent including a porous seal having a porosity of 20% or more.

SOUTHWICK, Jr. discloses a drying pouch having a drying agent (Figure 3) contained inside a porous pouch (Figure 4), such porous pouch consisting of two layers of a porous material (Figure 2).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the porous layers of SOUTHWICK, Jr. in the OELE of KAWAMI et al. to further protect the OELE from moisture trapped by the desiccant material as suggested by SOUTHWICK, Jr. (column 2, lines 20-27). It is further noted that KAWAMI et al. discloses the space separating the OELE 6 and the desiccant material 8 being filled by a dried inert gas. The inert gas is used to isolate the drying substance 8 from the OELE 6, while providing permeability to moisture.

Regarding the porosity of the porous seal of SOUTHWICK, Jr. being 20% or more, one of ordinary skill in the art at the time the invention was made would have recognized the "tissue paper" and "Kraft paper" of SOUTHWICK, Jr. to have a porosity well into the claimed range. Even if such one of ordinary skill failed to recognize the properties of the disclosed papers, the claimed range would still be obvious in light of SOUTWICK, Jr. statements regarding the "Kraft paper" being "very porous" and having "enhanced water vapor transmission characteristics" (column 3, lines 49-55).

4. Claims 5-11, 16-22, 29-35, 42-48, 52-58, 62-68 and 86-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over KAWAMI et al. (U.S. Pat. 5,882,761) in view of SOUTHWICK, Jr. (U.S. Pat. 2,578,324).

The combined teachings of KAWAMI et al. and SOUTHWICK, Jr. disclose, or suggest in combination (see Section 3 of the instant Office Action) all the limitations of the claims, except the illumination device being incorporated in one of a video camera, a digital camera, an image reproduction apparatus, a portable computer, a mobile telephone, a personal computer and an acoustic equipment.

The examiner takes Official Notice that the use of OELE devices is old and well known in the illumination art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the OELE of KAWAMI et al. and SOUTHWICK, Jr. in one of the cited apparatus. One would have been motivated since OELE are recognized in the illumination art to have many desirable advantages, including reduced size and thickness, high efficiency, low power consumption, long life, resistance to vibrations, and low heat production, over other light sources. See Section 5 of the instant Office Action.

Relevant Prior Art

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gary et al. (U.S. Pat. 2,548,780), **Adler** (U.S. Pat. 3,084,984), **Farrell et al**. (U.S. Pat. 4,425,410) and Duggal (U.S. Pat. 6,465,953) discloses drying agents contained inside porous layers.

Hirotaka et al. (U.S. Pat. 5,013,967), **Yamazaki** (U.S. Pat. 6,432,561) and **Yamazaki et al**. (U.S. Pat. 6,445,005) disclose organic display devices including drying

agents for increasing the life of the device. Both Yamazaki and Yamazaki et al. specifically disclose the use of OELE in various electronics devices such as display monitors, video and digital cameras, audio equipment and computers.

Response to Arguments

6. Applicant's arguments filed July 3, 2003 have been fully considered but they are not persuasive.

7. Regarding the Examiner's rejection of claims 1, 12, 23, 36, 49 and 59 under 35 U.S.C. 103(a) as unpatentable over KAWAMI et al. in view of SOUTHWICK, Jr. the applicant argues that the proposed combination fails to disclose, or even suggest, all the features of the claimed invention, specifically the drying agent being separated from the ELE by a permeable seal having 20% porosity or more.

In response to applicant's argument that the combined teachings of KAWAMI et al. and of SOUTHWICK, Jr. fail to disclose or even suggest the claimed invention, the applicant is advised that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, KAWAMI et al. disclose an organic electro luminescent element including a drying substance to prevent moisture from

degrading the organic luminescent material, while SOUTHWICK, Jr. discloses a desiccant pouch for protecting moisture sensitive devices and articles, such pouch consisting of two permeable layers enclosing a desiccant material in between. Modifying the device of KAWAMI et al. to include the teachings of SOUTHWICK, Jr. would have flown naturally to one of ordinary skill in the art at the time the invention was made. Regarding the porosity being 20% or more, SOUTHWICK, Jr. discloses the porous layer being made of Kraft paper. One of ordinary skill in the art at the time the invention was made would have recognized such paper as having a porosity well into the claimed range. In addition, SOUTHWICK, Jr. discloses the Kraft paper layer as being very porous and having enhanced water vapor transmission characteristics (see column 3, lines 49-55).

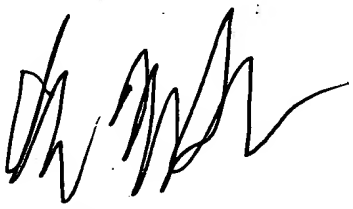
However, even if SOUTHWICK, Jr. had failed to disclose or suggest the specific range claimed by the applicant, such differences would not amount to a patentable difference. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only ordinary skill in the art. *In re Aller*, 105 USPQ 233. SOUTHWICK, Jr. disclosure of a porous layer would have being enough to propel one of ordinary skill in the art to discover the porosity necessary to achieve the intended purpose of absorbing moisture and preventing such moisture from damaging moisture-sensitive devices.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negron whose telephone number is (571) 272-2376. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (571) 272-2378. The facsimile machine number for the Art Group is (703) 872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications maybe obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, go to http://pair-direct.uspto.gov. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) toll-free at 866-217-9197.



THOMAS M. SEMBER
PRIMARY EXAMINER

Inr

May 28, 2004